

BACKUP STRATEGIES FOR LINUX (AND OTHER) OPERATING SYSTEMS

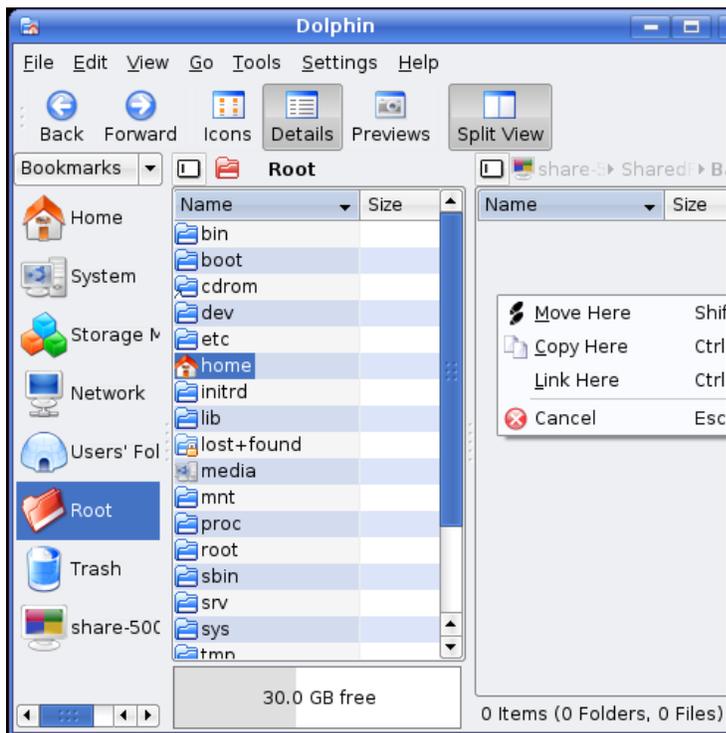
Backing up the information on your hard drive on a regular basis is critical for anyone who uses a computer routinely. You have spent hours-on-end recording the information that is on your hard drive, and much of that data is extremely important and irreplaceable stuff! You should be routinely backing up at least your new data files on a weekly basis. "Data" files include databases, documents, spreadsheets, etc. Anything YOU created on your hard drive is a data file.

If you don't have a second hard drive or network attached drive available to you, your choices include a CD burner (CD-RW drive) or a DVD burner (DVD-RW drive). Eons ago, the only way to perform a backup on a home computer was to save the data onto floppy disks. A typical PC's floppy disk holds only 1.44 MB of data, so you might get one or two files on a floppy disk. Today, if you have a file that is larger than 1.44 MB (like a moderate OpenOffice Impress presentation file, or a Writer document file with graphics) an ordinary floppy disk has no hope of holding even one whole file. CD-R or CD-RW disks hold much more than floppy disks and are your best choice for routine storage of information on removable media. A typical recordable CD holds between 450 and 500 times what will fit on a single floppy disk. DVDs are significantly larger than that.

When backing-up data files, it is not necessary to backup every file you have on your hard drive. (Although it's a good idea to do so monthly. See below.) Many of you listeners to the Going Linux podcast are Linux users. For you, few files (if any) outside of your Home directory need to be backed-up at all. If a disaster were to happen, and you lost your computer or your hard drive, you could simply

reinstall the Linux operating system and restore the backed-up contents of your Home directory. Your Home directory contains the information that you have created yourself, including your mail file, and the settings and preferences for most of your applications. In Episodes [29](#), [31](#) and [106](#) of the podcast, we discuss specific Linux applications you can use to accomplish your backups.

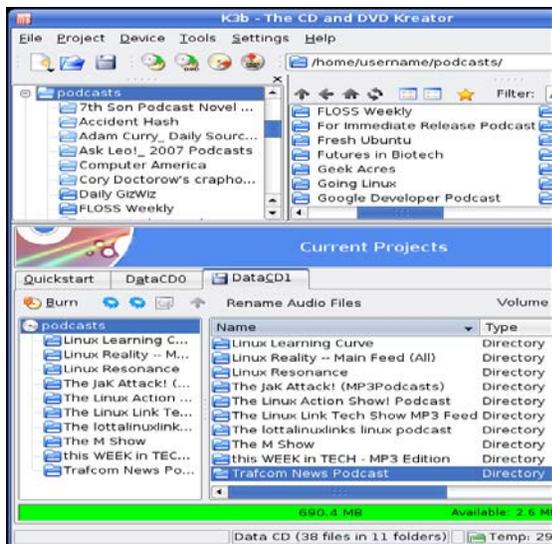
If you have a home network you may be lucky enough to own a multi-gigabyte network-attached hard drive. Instead of being stored on your computer's hard drive, the files you copy to the networked drive are stored safely off of your computer. That way, if something happens to your computer's hard drive, or if you have your laptop stolen, all your files are safely stored on an external device. (In the illustration below, On an old laptop, I am using Kubuntu's Dolphin file manager to take my entire "home" directory and copy it to an external 500GB drive, shared on my network using SMB.)



An equivalent to a network drive (well, sort of...) would be an online storage service like Dropbox, Ubuntu One, or Box.net. The advantage to this kind of backup is that your files are stored on the Internet. Even if the worst were to happen, and you lost everything to a fire or flood, your backups would be safe.

Cheap Disaster Recovery Insurance

The easiest way to backup inexpensively, is to get a firewire or USB 2.0 external hard drive and copy everything in your Home directory to it on a regular basis. If you don't have an external hard drive, you can use CD/DVD Burning software like K3B, and a CD-RW or DVD-R drive, to write to CD-R or DVD-R discs. These discs are very cheap, but you can only write to them. You can't erase the contents of a CR-R or DVD-R and re-use the disc. Re-writable CD and DVD media, on the other hand, have become very affordable in recent years. You can read, erase and write to CD-RW and DVD-RW disks much like you can with floppy disks. They just take a while to format the first time you use them.



At least monthly, you should make a complete backup of everything important on your hard drive -- using backup software, or by simply copying to a disk, a second hard drive or a network drive. Linux applications such as [rsync](#), [Simple Backup](#) and [Bacula](#) can automate these backups for you. You do this so that if your computer or hard drive were to be stolen, destroyed or damaged beyond repair, you would have a "disaster recovery" copy. From a "disaster recovery" copy, you could restore your entire Home directory to the condition it was in, at the time of your last backup. If you do such a complete backup monthly, the worst case is that you have to restore only 1 month's worth of data from your incremental data backups. (See below.)

How Often to Backup

In reality, how often you should backup depends on several factors. In general, the more you use your computer or the more critical the work you are doing, the more often you should back-up.

External hard drives have become so inexpensive that it is wise to include an external hard drive in your budget when you are buying a new computer. Use the external drive to make a complete backup of your entire hard drive every month. You can use many of the backup utilities available in your Linux distribution's package repositories to automate this process. [Clonezilla Live](#) is such a utility. You can even setup some of this software so that it copies only new files, and updates new versions of files on your computer, to the backup device, never deleting anything from the copy. What a lifesaver that can be!

Today most computers come equipped with at least a CR-RW drive. Invest in a set of CD-RW disks, or even just CD-R disks. So if you don't have a second hard drive, use the CD-RW drive to make the monthly full backup. Each week you should back up your critical data files in an incremental backup (backup only what has changed since your last full backup) onto a recordable or re-writable CD.

Source : <http://goinglinux.com/articles/Backups.html>